Spill Scene Special Issue

1998 Annual Report

Spill Prevention, Preparedness and Response Program

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Letter from the Program Manager

1998 proved to be a dynamic year for the Spill Prevention, Preparedness, and Response Program. During this first full year as a Program, we grew, developed our existing strengths and met several new challenges.

In support of our prevention priorities, we added a vessel inspector to our Seattle field office and inspection levels are now at an all-time high. We continued to screen all eligible vessels for risk factors. We moved forward, in partnership with the U.S. Coast Guard, to improve protection of the North Puget Sound by addressing the marine safety risks. Our goal is to work with the Coast Guard and citizens to provide leadership on this often-contentious issue, bringing people together to develop a risk management plan to prevent catastrophic oil spills.

We broke new ground in developing response tools through the in situ burn drill near Port Angeles, testing real-time air modeling and monitoring systems developed by Ecology's Air Quality Program. This drill also allowed us to work closely with Clallam County to improve our communication and decision-making processes.

We developed a skills-based training program for spill responders to improve safety during a response. We responded to a record 349 drug lab cleanups, a 59 percent increase over 1997. We improved our cleanup methods to meet this challenge within our budget, but the increasing workload continues to tax our response resources.

We integrated the investigation and enforcement programs of Ecology and the former Office of Marine Safety to ensure a smoother and more predictable effort, whether we are dealing with a marine or land-based spill. This work continues to provide "lessons learned" to share with our clients.

We worked with an Advisory Committee appointed by the Legislature to evaluate the merger of the Office of Marine Safety and Ecology's Spills Response office. The evaluation found that the merger was successful. It recommended we leave the Program as is, continue our high level of maritime safety and prevention efforts, and form a permanent Citizen Advisory Council to further enhance our ability to keep our public informed and involved.

This was also a dynamic year for the Program's workforce. As much as 60 percent of our staff experienced some change, either in duties or promotions/transfers to other positions.

We continue to face the major challenge of achieving sufficient Program funding via the barrel tax on oil received over marine waters. As

Program Overview

In 1991, the Washington State Legislature passed the Oil Spill Prevention and Response Act in response to the 1988 *Nestucca* oil barge spill in Grays Harbor County and the 1989 *Exxon Valdez* oil spill in Alaska. The Act set the funding mechanism and mandate for the state's spill program. It increased state involvement in oil spill prevention, preparedness, and response activities. Oil spill prevention activities were split between the state Office of Marine Safety (OMS), to oversee marine vessel safety and spill prevention activities, and the Department of Ecology, to oversee spill prevention activities at oil handling facilities (refineries, pipelines, etc.)

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the biennium comes to a close it isn't clear if we will have enough revenue to support all program activities. But we remain committed to our goals – to improve overall marine safety through prevention and preparedness efforts and become more efficient in our response. I look forward to what 1999 will bring and, as always, I am proud to be part of this effort.

Joe Stohr
Program Manager

Program Overview cont.

On July 1, 1997, OMS merged with Ecology to create the Spill Prevention, Preparedness, and Response Program within Ecology. The new Program is comprised of about 62 staff -- spill responders, vessel inspectors, environmental planners, engineers, and other management and support staff. The Spills Program maintains vessel inspection field offices near the Seattle and Portland ports, and regional response offices in Bellevue, Olympia, Yakima, and Spokane.

Introduction

This annual report summarizes the 1998 activities of the Department of Ecology's Spill Prevention, Preparedness, and Response Program (Spills Program). The Spills Program is dedicated to protecting human health and the environment from the threat posed by oil and hazardous substance spills to Washington's land and waters.

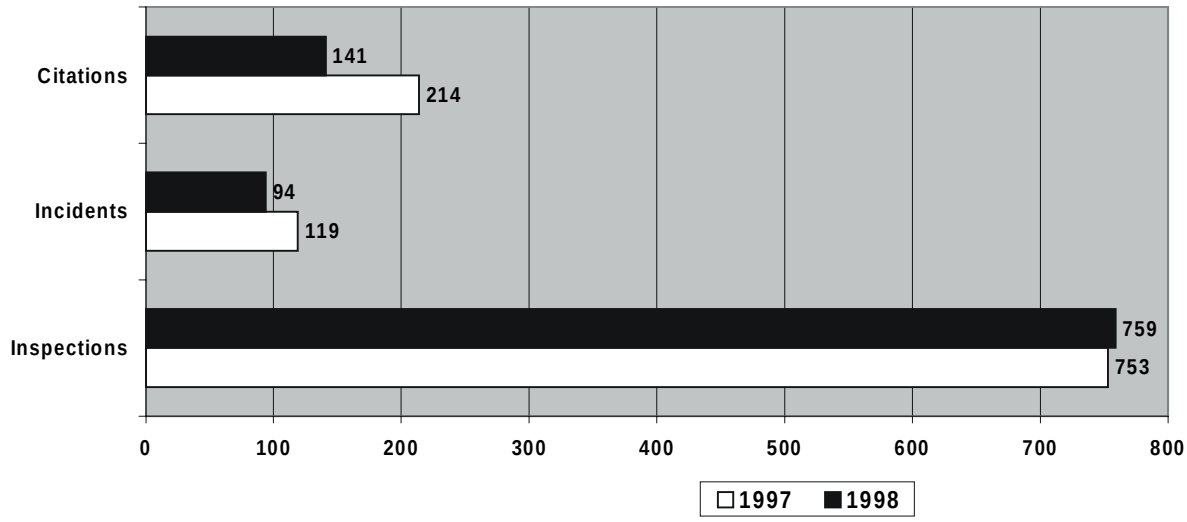
1998 Prevention Activities

Vessels

The 1998 statistics are encouraging, as they point toward an increasing level of safety awareness and compliance by vessels entering Washington waters. The trend toward more vessel inspections and fewer incidents and enforcement actions, first noticed in 1997, continued during 1998. The ratio of incidents to vessel entering transits dropped from 1.5 percent in 1997, to 1.3 percent in 1998. The ratio of enforcement actions to number of vessels inspected dropped from 28.4 percent in 1997, to 18.6 percent in 1998. The Pacific Rim economic downturn continued to be felt as the number of vessels entering and transiting Washington waters declined from 7,905 in 1997, to 7,262 in 1998.

Spills staff continued to analyze selected incidents. This analysis allows the program to publicize the lessons learned, and to determine

1998 and 1997 Inspections, Incidents and Citations



Vessel Data		
	1997	1998
Vessel Entering Transits to Washington Waters[1]	5719	5178
Cargo Vessel Screenings	2919	2629
Screened Vessels of High/Very High Risk	1627	1391
Incidents Reported[2]	119	94
Inspections	753	759
Citations Issued	214	141

[1]Commercial cargo, passenger and fishing vessels, 300 gross tons and larger, and all oil tankers. Does not include tank barges, ferries or Canada-bound vessels.
[2]Spills and marine casulaties (collision, loss of power, serious violation, etc.) for all vessels

the facts to support or mitigate possible enforcement action. Staff produced a Prevention Bulletin analyzing a near-miss situation between two tankers in the Strait of Juan de Fuca, caused by an electrical failure in one vessel's steering system. They also issued a Safety Advisory Bulletin on the problems associated with ill-conceived or undocumented modifications to shipboard systems and how that can compromise safety and affect the marine environment.

Planning

Companies operating oil tankers and tank barges in Washington waters must have vessel oil spill prevention plans meeting Best Achievable Protection (BAP) standards, and operate according to those plans. Each company's plan can cover one or more vessels. During 1998, Spills Program staff received 18 vessel prevention plans, reviewed 27 plans for compliance, and granted conditional approval for four plans and full approval for 32 plans. Ecology inspectors also conducted 55 BAP compliance inspections of oil tankers and tank barges operating under an approved prevention plan.

Oil handling facilities in Washington must prepare operations manuals and submit them to Ecology for review and approval. These manuals help ensure the facilities have incorporated BAP standards to prevent spills when they transfer oil. During 1998, Spills Program staff reviewed and approved the operations manuals for 28 facilities.

1998 Preparedness Activities

Drills and exercises

Spill drills and exercises help make sure everyone involved in responding to a spill is able to take the best possible actions. During

Prevention Overview

- **Vessel Screening** – Cargo and passenger vessels entering Washington waters are screened for potential environmental risks.
- **Vessel Boarding Program** – Inspections evaluate the management and operational performance of ships and crews.
- **Bunker Monitoring (Refueling)** – Bunkering inspections help reduce the frequency of spills during fuel transfers.
- **Best Achievable Protection (BAP) Standards for Tank Vessels** – Vessel owners submit spill prevention plans to Ecology to ensure that vessels apply BAP standards when operating in Washington waters.
- **Investigations** – Investigations of vessel incidents (marine casualties, oil spills, near misses, etc.) help determine if prevention lessons can be learned.
- **Oil Handling Facilities** – Facility owners submit spill prevention plans to Ecology to ensure that facilities and pipelines apply BAP standards to keep spills from occurring.

Preparedness Overview

- **Oil Spill Drills & Contingency Plan Review** – Oil handling facilities, oil tankers and barges, and fishing, cargo and passenger vessels must have approved oil spill contingency plans to operate in Washington waters.
- **Geographic Response Plans (GRPs)** – GRPs identify and rank natural resource protection strategies for a particular region. This takes the guesswork out of the initial response during the first 12-24 hours.
- **Natural Resource Damage Assessments** – Assess damages to state natural resources caused by oil spills and recover restoration costs from the parties responsible for the spill.
- **Interagency Coordination** – Coordination between states and provinces along the West Coast ensures a consistent approach to spill prevention and response.
- **Education and Outreach** – Provide education and outreach to constituents

1998, regulated oil-handling facilities throughout the state conducted numerous equipment deployment and tabletop drills to test the effectiveness of their contingency plans. Ecology participated in and evaluated 84 drills, recommending how facilities can enhance their spill response readiness.

Some significant exercises in 1998 included the Olympic Pipe Line Company's notification and tabletop drill, using a worst-case spill volume. Ecology assisted with this drill's design and training, as well as participating. Ecology also assisted with planning a drill for Texaco's Puget Sound Plan, that included training the company's "Away" team from all over the west coast. In the fall, Ecology helped to develop and participated in an equipment deployment and tabletop drill based on an in situ burn situation near Port Angeles. This drill including a real-time test of Ecology's air modeling and monitoring staff and equipment.

Most regulated facilities have adopted the National Interagency Incident Management System, as described in the 1998 edition of the Northwest Area Contingency Plan. Ecology has provided introductory training on this system, and the incident command system, to 18 facilities to help them as they modify their response organization.

Another type of drill, the vessel notification drill, tests the ability of a vessel's crew to make the initial notifications required in the vessel's oil spill contingency plan, just as if they had experienced an actual oil spill. The vessel inspector verifies that a crewmember has the required documents and can notify the National Response Center, Washington Emergency Management Division, and the vessel's primary response contractor. Ecology vessel inspectors conducted 25 of these no-notice drills in 1998. Most of the vessel crews were able to complete the notification, but a few common problems included not having the required document, not understanding the notification procedures, not contacting the state Emergency Management Division, and only contacting the ship's agent.

Contingency plans

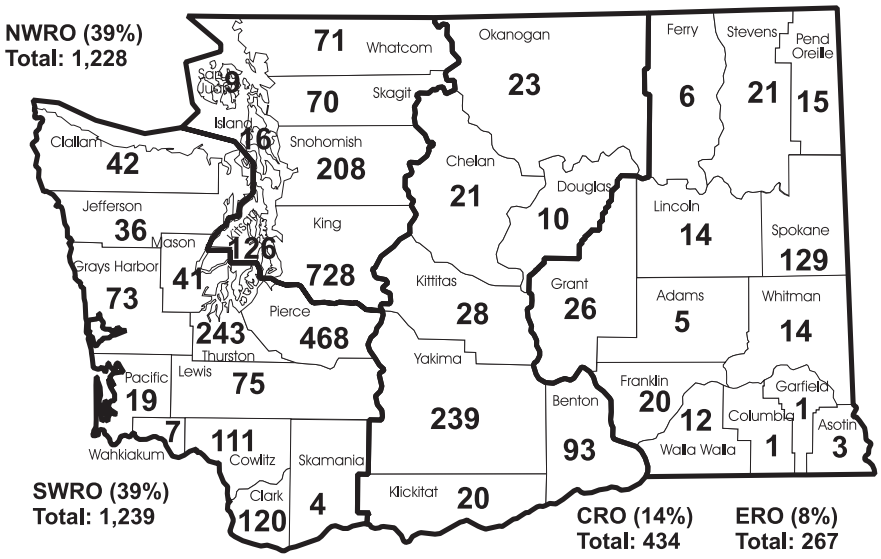
In 1998, staff working with facility and vessel contingency plans reviewed and refined the contingency plan review and drill processes. They analyzed the results of a survey sent in 1997 to plan holders and spill responders involved in Ecology's drill program. They updated the drill program based on the survey results and changes made to the Northwest Area Contingency Plan. As a result of their efforts, in June Ecology released the new *Designing and Conducting Oil Spill Drills Guidance Document* (WDOE #98-251).

The contingency plan staff also began reviewing and updating the contingency plan review manual in preparation for the next plan review cycle. Contingency plans must be resubmitted every five years after they are initially approved. The manual had focused on the rules for facilities, but the new manual will include both facility and vessel rules. It is also being updated to correspond with the changes in Northwest Area Contingency Plan and the drill program. The new manual is planned for release in the spring of 1999.

1998 Response Activities

In 1998, the Spills Program received 3,168 reports of spills in Washington, and 35 reports of spills in adjoining states. Staff conducted 1,011 field responses. This map illustrates where the reported spills occurred, by county and by Ecology region. The percentage figures reflect each region's portion of the total reported spills statewide.

Spill Reports by County for 1998



Confirmed spills to water

In 1998 there were 26 spills of 25 or more gallons of hazardous substances, including petroleum products, where the spill reached a water body or groundwater. There was a total of 15,867 gallons spilled in these incidents. In 1997, there were 23 spills of this type, with a total volume spilled of 9,923 gallons.

25+ Gallon Spills to Water[1] for 1998		
	Number of Spills	Gallons Spilled
Covered Vessels[2]	10	8468
Uncovered Vessels	8	6067
Other[3]	8	1332
Total	26	15,867

[1]Water body or groundwater
[2]Vessels covered under state laws and rules (all cargo and passenger vessels 300 gross tons or larger, all oil vessels)
[3]Pipelines, tanks, tank trucks, etc.

Response Overview

- **24-Hour Statewide Response** – Ecology provides round-the-clock response to oil and hazardous material spills that pose a risk to public health and safety and the environment.
- **Compliance and Enforcement** – Once an oil spill occurs, Ecology can take a wide range of enforcement and compliance actions including administrative orders, field citations, penalties, and cost recovery of all response costs incurred by the state.
- **Cleanup Oversight** – As the state natural resource trustee during an oil spill, Ecology has oversight authority to ensure that the responsible party is acting responsibly to clean up the spill and to fully protect the environment.

Spill Reports by Type for 1998	
Type of Substance	Number of Reports
Petroleum Products Gasoline, diesel fuel, crude oil, hydraulic oil, lubrication oil	1526
Hazardous Substances Pesticides, insecticides, batteries, paint, other toxics (anhydrous ammonia, hydrochloric acid, solvents, lithium)	699
Miscellaneous Substances Wastewater, sewage sludge, garbage, dairy waste, algae	895

Drug labs

There were 349 field responses conducted by Ecology staff in 1998 to clean up clandestine drug lab sites, primarily methamphetamine. This compares to 203 drug labs responded to in 1997 and 153 labs in 1996. These sites were found in 25 of Washington's 39 counties. Pierce County alone accounted for 129 of the labs responded to, although this may be due to Pierce County's increased emphasis on drug investigation and enforcement.

Spills Program staff continued to seek ways to offset the costs of this increased response burden. They were able to realize significant savings by training response staff to assess, clean up and transport hazardous substances from drug labs, work previously done entirely by private contractors. Additional savings came from taking advantage of disposal services provided by local governments for small quantities of hazardous waste.

Enforcement

Washington's rules are designed to keep oil and other hazardous material spills from occurring, and to make sure that the best possible action is taken promptly if a spill does occur. Certain classes of vessels must maintain and comply with oil spill contingency plans; others must also maintain and comply with oil spill prevention plans. All vessels must comply with the state's refueling requirements, and show that they pose no substantial risk of harm to public health and safety or the environment.

Oil handling facilities must also comply with laws and rules designed to prevent oil spills and ensure best possible action when a spill occurs. The rules address operation and design standards, operating procedures, personnel training, and spill prevention plans.

Ecology can respond to spills and violations of these rules in a variety of ways, including issuing penalties, warnings, and administrative orders, and requiring the responsible party to make changes to correct the problem. In 1998, Ecology issued a total of $368,660 in penalties and one administrative order for large oil spills. Oil spill field citations for lesser spills resulted in an additional $7,000 in penalties. These figures compare to 1997, when the agency issued $41,500 in penalties, $2,500

in field citation penalties, and two administrative orders related to spills.

The largest 1998 penalty was $182,000 issued to the containership ANADYR and its owner, the Far Eastern Shipping Co. (FESCO) of Vladivostok, Russia. While refueling on January 1, the ship spilled more than 7,500 gallons of fuel oil into Sitcum Waterway in Tacoma. An additional $21,000 penalty was assessed against the same ship in May for a similar refueling spill in Tacoma's Blair Waterway.

During 1998, Ecology issued 141 enforcement actions representing 178 violations of the rules for vessels. There were 26 violations of the oil spill contingency plan requirement, four violations of the oil spill prevention plan requirement, 56 violations relating to substantial risk of harm, and 90 violations of refueling requirements. One company, Forty Niner Transportation, Inc. was assessed a $74,660 penalty for operating fuel barges without a required oil spill contingency plan.

Spills Program staff also conduct investigations of spills at oil handling facilities. These investigations are designed to determine the cause of a spill, to identify measures that could be taken to prevent similar spills, and to take enforcement action when necessary. Spills Program staff coordinate their work on oil handling facilities with staff from Ecology's Industrial Section. The Industrial Section regulates permitting for major facilities.

In 1998, the two offices jointly issued an administrative order and notice of penalty for $30,000 to US Oil for a tank overfill spill of 75,390 gallons of oil at the company's dockside tank farm in Tacoma. Although the spill was contained within the facility, the oil reached groundwater because there was not an impermeable barrier under the tank farm area.

1998 Restoration Activities

Natural Resource Damage Assessments

In addition to penalties and cleanup expenses, those responsible for oil spills must compensate Washington citizens for damage to public natural resources. Ecology coordinates the assessment of oil spill damages and oversees efforts to restore injured resources in cooperation with other state resource agencies.

During 1997, 26 spills occurred that triggered the Natural Resource Damage Assessment process. As of March 1999, the monetary assessment has been determined for seven of those cases, for a total of $105,006. Assessments may be collected during the year the spill occurs, or in later years. In 1998, more than $70,650 was collected for restoration projects.

The U.S. Navy settled the damage assessments for three separate spills by providing labor, equipment and supplies for three spartina removal projects.

The Coastal Protection Fund also is used for natural resource restoration. In 1998, the fund supported enhancing fish passage and spawning in streams feeding Samish Lake. It also paid the closing costs and other expenses for a land exchange involving wetlands on Long Beach.

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